Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S46	29	determin$4 same internal near2 external near3 access$3 and embedded *Rev all*	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/07/07 13:19
S45	2	"6308317".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/07/07 11:13
S44	73	assign$4 near2 identifier near2 module and cod$4 and load$4 *Scan all*	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/07/07 10:04
S43	63	load$4 same applications same embedded adj system$2	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/07/07 10:04

PORTAL
USPTO

Search: ⊙ The ACM Digital Library　O The Guide

reference external internal class "embedded system"

THE ACM DIGITAL LIBRARY

Feedback　Report a problem　Satisfaction survey

Terms used **reference external internal class embedded system**

Found **100,883** of **157,956**

| Sort results by | relevance ▾ |
| Display results | expanded form ▾ |

❖ Save results to a Binder
❓ Search Tips
☐ Open results in a new window

Try an Advanced Search
Try this search in The ACM Guide

Results 1 - 20 of 200　　　Result page: **1** 2 3 4 5 6 7 8 9 10　next
Best 200 shown　　　　　　　　　　　　　　　　　Relevance scale ☐ ▭ ▨ ▦ ▪

1 Practical extraction techniques for Java
Frank Tip, Peter F. Sweeney, Chris Laffra, Aldo Eisma, David Streeter
November 2002 **ACM Transactions on Programming Languages and Systems (TOPLAS)**, Volume 24 Issue 6
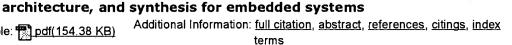
Full text available: 📄 pdf(1.01 MB)　　Additional Information: full citation, abstract, references, citings, index terms, review

Reducing application size is important for software that is distributed via the internet, in order to keep download times manageable, and in the domain of embedded systems, where applications are often stored in (Read-Only or Flash) memory. This paper explores extraction techniques such as the removal of unreachable methods and redundant fields, inlining of method calls, and transformation of the class hierarchy for reducing application size. We implemented a number of extraction techniques in < ...

Keywords: Application extraction, call graph construction, class hierarchy transformation, packaging, whole-program analysis

2 Session S9.2: embedded programs: Real Java for real time - gain and pain
Anders Nilsson, Torbjörn Ekman, Klas Nilsson
October 2002 **Proceedings of the 2002 international conference on Compilers, architecture, and synthesis for embedded systems**

Full text available: 📄 pdf(154.38 KB)　　Additional Information: full citation, abstract, references, citings, index terms

The Java programming language, being a portable and safe object-oriented language, has gained much interest among embedded and real-time systems developers. However, standard Java implementations exhibit problems with performance, memory footprint, and predictability. The question is then, are these limitations inherent in the technology? Reviewing run-time aspects and the possibility to compile Java to native code, reveals some real limitations as well as common misconceptions. Investigation of ...

Keywords: embedded systems, real-time Java, rtj

3 Programming languages: Garbage collection for embedded systems
David F. Bacon, Perry Cheng, David Grove
September 2004 **Proceedings of the fourth ACM international conference on Embedded**

software

Full text available: 📄 pdf(199.59 KB)   Additional Information: <u>full citation</u>, <u>abstract</u>, <u>references</u>, <u>index terms</u>

Security concerns on embedded devices like cellular phones make Java an extremely attractive technology for providing third-party and user-downloadable functionality. However, garbage collectors have typically required several times the maximum live data set size (which is the minimum possible heap size) in order to run well. In addition, the size of the virtual machine (ROM) image and the size of the collector's data structures (metadata) have not been a concern for server- or workstation-orien ...

Keywords: compaction, fragmentation, mark-and-sweep, tracing

4 <u>A practical comparison between Java and Ada in implementing a real-time embedded system</u>
Eric Potratz
December 2003 **ACM SIGAda Ada Letters , Proceedings of the 2003 annual ACM SIGAda international conference on Ada: the engineering of correct and reliable software for real-time & distributed systems using ada and related technologies**, Volume XXIV Issue 1

Full text available: 📄 pdf(259.58 KB)   Additional Information: <u>full citation</u>, <u>abstract</u>, <u>references</u>, <u>index terms</u>, <u>review</u>

This paper presents a student's observations from an undergraduate research project that explored using Java to implement the software for a real-time embedded system that was originally implemented in a university-level real-time systems course using Ada 95. It briefly gives an overview of the project, the decision made concerning which Java virtual machine to use, and how that virtual machine performed in the real-time environment. It then goes into detail about the merits and drawbacks of usi ...

Keywords: Ada, Java, concurrency, conditional synchronization, drivers, embedded systems, memory management, object-oriented programming, package elaboration, performance, priority inversion, real-time systems, scheduling

5 <u>Survey of code-size reduction methods</u>
Árpád Beszédes, Rudolf Ferenc, Tibor Gyimóthy, André Dolenc, Konsta Karsisto
September 2003 **ACM Computing Surveys (CSUR)**, Volume 35 Issue 3

Full text available: 📄 pdf(443.89 KB)   Additional Information: <u>full citation</u>, <u>abstract</u>, <u>references</u>, <u>index terms</u>

Program code compression is an emerging research activity that is having an impact in several production areas such as networking and embedded systems. This is because the reduced-sized code can have a positive impact on network traffic and embedded system costs such as memory requirements and power consumption. Although code-size reduction is a relatively new research area, numerous publications already exist on it. The methods published usually have different motivations and a variety of appli ...

Keywords: code compaction, code compression, method assessment, method evaluation

6 <u>Controlling fragmentation and space consumption in the metronome, a real-time garbage collector for Java</u>
David F. Bacon, Perry Cheng, V. T. Rajan
June 2003 **ACM SIGPLAN Notices , Proceedings of the 2003 ACM SIGPLAN conference on Language, compiler, and tool for embedded systems**, Volume 38 Issue 7

Full text available: 📄 pdf(354.15 KB)   Additional Information: <u>full citation</u>, <u>abstract</u>, <u>references</u>, <u>citings</u>, <u>index terms</u>

Now that the use of garbage collection in languages like Java is becoming widely accepted due to the safety and software engineering benefits it provides, there is significant interest in applying garbage collection to hard real-time systems. Past approaches have generally suffered from one of two major flaws: either they were not provably real-time, or they imposed large space overheads to meet the real-time bounds.Our previous work [3] presented the Metronome, a mostly non-copying real-time co ...

Keywords: compaction, cost model, fragmentation, space bounds

7 ## Compact Java binaries for embedded systems
Derek Rayside, Evan Mamas, Erik Hons
November 1999 **Proceedings of the 1999 conference of the Centre for Advanced Studies on Collaborative research**

Full text available: pdf(124.35 KB)   Additional Information: full citation, abstract, references, citings, index terms

Embedded systems bring special purpose computing power to consumer electronics devices such as smartcards, CD players and pagers. Java is being aggressively targeted at such systems with initiatives such as the Java 2 Platform, Micro Edition, which introduces certain efficiency optimizations to the Java Virtual Machine. Code size reduction has been identified as an important future goal for ensuring Java's success on embedded systems [20]. However, limited processing power and timing constraints ...

8 ## Embedded systems: applications, solutions and techniques (EMBS): Code generation techniques for developing light-weight XML Web services for embedded devices
Robert van Engelen
March 2004 **Proceedings of the 2004 ACM symposium on Applied computing**

Full text available: pdf(404.19 KB)   Additional Information: full citation, abstract, references

This paper presents specialized code generation techniques and runtime optimizations for developing light-weight XML Web services for embedded devices. The optimizations are implemented in the gSOAP Web services development environment for C and C++. The system supports the industry-standard XML-based Web services protocols that are intended to deliver universal access to any networked application that supports XML. With the standardization of the Web services protocols and the availability of t ...

Keywords: Web Services, XML, embedded systems, networking

9 ## An optimal memory allocation scheme for scratch-pad-based embedded systems
Oren Avissar, Rajeev Barua, Dave Stewart
November 2002 **ACM Transactions on Embedded Computing Systems (TECS)**, Volume 1 Issue 1

Full text available: pdf(396.62 KB)   Additional Information: full citation, abstract, references, citings, index terms

This article presents a technique for the efficient compiler management of software-exposed heterogeneous memory. In many lower-end embedded chips, often used in microcontrollers and DSP processors, heterogeneous memory units such as scratch-pad SRAM, internal DRAM, external DRAM, and ROM are visible directly to the software, without automatic management by a hardware caching mechanism. Instead, the memory units are mapped to different portions of the address space. Caches are avoided due to the ...

Keywords: Memory, allocation, embedded, heterogeneous, storage

10 Compiling java for low-end embedded systems

Ulrik Pagh Schultz, Kim Burgaard, Flemming Gram Christensen, Jørgen Lindskov Knudsen

June 2003 **ACM SIGPLAN Notices , Proceedings of the 2003 ACM SIGPLAN conference on Language, compiler, and tool for embedded systems**, Volume 38 Issue 7

Full text available: pdf(267.00 KB)   Additional Information: full citation, abstract, references, index terms

The production of embedded systems is continuously increasing, but developing reusable software for such systems is notoriously difficult, in particular in the case of low-end embedded systems based on 16-bit or 8-bit processors. We have developed a compilation system for executing Java byte code on low-end embedded systems, and we demonstrate how this system permits object-oriented programming techniques to be used on devices with only a few hundred bytes of RAM and a few kilobytes of ROM.We an ...

Keywords: Java, compilers, embedded systems, interfaces

11 Computing curricula 2001

September 2001 **Journal on Educational Resources in Computing (JERIC)**

Full text available: pdf(613.63 KB)
                   html(2.78 KB)   Additional Information: full citation, references, citings, index terms

12 Session 1: Varieties of self-reference

Brian Cantwell Smith

March 1986 **Proceedings of the 1986 conference on Theoretical aspects of reasoning about knowledge**

Full text available: pdf(2.57 MB)   Additional Information: full citation, abstract, references

The significance of any system of explicit representation depends not only on the immediate properties of its representational structures, but also on two aspects of the attendant circumstances: implicit relations among, and processes defined over, those individual representations, and larger circumstances in the world in which the whole representational system is embedded. This relativity of representation to circumstance facilitates local inference, and enables representation to connect wit ...

13 Data and memory optimization techniques for embedded systems

P. R. Panda, F. Catthoor, N. D. Dutt, K. Danckaert, E. Brockmeyer, C. Kulkarni, A. Vandercappelle, P. G. Kjeldsberg

April 2001 **ACM Transactions on Design Automation of Electronic Systems (TODAES)**, Volume 6 Issue 2

Full text available: pdf(339.91 KB)   Additional Information: full citation, abstract, references, citings, index terms

We present a survey of the state-of-the-art techniques used in performing data and memory-related optimizations in embedded systems. The optimizations are targeted directly or indirectly at the memory subsystem, and impact one or more out of three important cost metrics: area, performance, and power dissipation of the resulting implementation. We first examine architecture-independent optimizations in the form of code transoformations. We next cover a broad spectrum of optimizati ...

Keywords: DRAM, SRAM, address generation, allocation, architecture exploration, code transformation, data cache, data optimization, high-level synthesis, memory architecture customization, memory power dissipation, register file, size estimation, survey

14 Physical interface: Fine-grained network time synchronization using reference

broadcasts
Jeremy Elson, Lewis Girod, Deborah Estrin
December 2002 **ACM SIGOPS Operating Systems Review**, Volume 36 Issue SI

Full text available: pdf(2.10 MB)   Additional Information: full citation, abstract, references, citings

> Recent advances in miniaturization and low-cost, low-power design have led to active research in large-scale networks of small, wireless, low-power sensors and actuators. Time synchronization is critical in sensor networks for diverse purposes including sensor data fusion, coordinated actuation, and power-efficient duty cycling. Though the clock accuracy and precision requirements are often stricter than in traditional distributed systems, strict energy constraints limit the resources available ...

15 Energy-aware design of embedded memories: A survey of technologies, architectures, and optimization techniques
Luca Benini, Alberto Macii, Massimo Poncino
February 2003 **ACM Transactions on Embedded Computing Systems (TECS)**, Volume 2 Issue 1

Full text available: pdf(288.44 KB)   Additional Information: full citation, abstract, references, index terms

> Embedded systems are often designed under stringent energy consumption budgets, to limit heat generation and battery size. Since memory systems consume a significant amount of energy to store and to forward data, it is then imperative to balance power consumption and performance in memory system design. Contemporary system design focuses on the trade-off between performance and energy consumption in processing and storage units, as well as in their interconnections. Although memory design is as ...

> **Keywords**: Embedded systems, embedded memories, integration, memories, nonvolatile, system-on-a-chip, volatile

16 Introducing Ada 9X
John Barnes
November 1993 **ACM SIGAda Ada Letters**, Volume XIII Issue 6

Full text available: pdf(4.39 MB)   Additional Information: full citation, citings, index terms

17 CHAOSarc: kernel support for multiweight objects, invocations, and atomicity in real-time multiprocessor applications
Ahmed Gheith, Karsten Schwan
February 1993 **ACM Transactions on Computer Systems (TOCS)**, Volume 11 Issue 1

Full text available: pdf(2.81 MB)   Additional Information: full citation, abstract, references, citings, index terms, review

> CHAOSarc is an object-based multiprocessor operating system kernel that provides primitives with which programmers may easily construct objects of differing types and object invocations of differing semantics, targeting multiprocessor systems, and real-time applications. The CHAOSarc can guarantee desired performance and functionality levels of selected computations in real-time applications. Such guarantees can be made despite poss ...

18 Caches and Memory Systems: Heterogeneous memory management for embedded systems
Oren Avissar, Rajeev Barua, Dave Stewart
November 2001 **Proceedings of the 2001 international conference on Compilers, architecture, and synthesis for embedded systems**

Full text available: 📄 pdf(241.12 KB)   Additional Information: <u>full citation</u>, <u>abstract</u>, <u>references</u>, <u>citings</u>, <u>index terms</u>

This paper presents a technique for the efficient compiler management of software-exposed heterogeneous memory. In many lower-end embedded chips, often used in micro-controllers and DSP processors, heterogeneous memory units such as scratch-pad SRAM, internal DRAM, external DRAM and ROM are visible directly to the software, without automatic management by a hardware caching mechanism. Instead the memory units are mapped to different portions of the address space. Caches are avoided because of th ...

Keywords: embedded, heterogeneous, memory, storage

19 <u>System-level power optimization: techniques and tools</u>
Luca Benini, Giovanni de Micheli
April 2000 **ACM Transactions on Design Automation of Electronic Systems (TODAES),**
Volume 5 Issue 2

Full text available: 📄 pdf(385.22 KB)   Additional Information: <u>full citation</u>, <u>abstract</u>, <u>references</u>, <u>citings</u>, <u>index terms</u>

This tutorial surveys design methods for energy-efficient system-level design. We consider electronic sytems consisting of a hardware platform and software layers. We consider the three major constituents of hardware that consume energy, namely computation, communication, and storage units, and we review methods of reducing their energy consumption. We also study models for analyzing the energy cost of software, and methods for energy-efficient software design and compilation. This survery ...

20 <u>Embedded applications: Encryption overhead in embedded systems and sensor network nodes: modeling and analysis</u>
Ramnath Venugopalan, Prasanth Ganesan, Pushkin Peddabachagari, Alexander Dean, Frank Mueller, Mihail Sichitiu
October 2003 **Proceedings of the 2003 international conference on Compilers, architecture and synthesis for embedded systems**

Full text available: 📄 pdf(293.59 KB)   Additional Information: <u>full citation</u>, <u>abstract</u>, <u>references</u>, <u>citings</u>, <u>index terms</u>

Recent research in sensor networks has raised issues of security for small embedded devices. Security concerns are motivated by the deployment of a large number of sensory devices in the field. Limitations in processing power, battery life, communication bandwidth and memory constrain the applicability of existing cryptography standards for small embedded devices. A mismatch between wide arithmetic for security (32 bit word operations) and embedded data bus widths (often only 8 or 16 bits) combi ...

Keywords: embedded systems, encryption, security, sensor networks

Results 1 - 20 of 200   Result page: **1** <u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>6</u> <u>7</u> <u>8</u> <u>9</u> <u>10</u>   <u>next</u>

Google

reference external internal class "embedded s| Search   Advanced Search
Preferences

Web
Results **1 - 10** of about 37,000 for **reference external internal class "embedded system"**. (0.40 seconds)

Bluetooth Development, Evaluation, Starter, and **Reference** Design Kits
Bluetooth **Reference** Design Kit includes Schematics, gerbers, layout files, ... adapter
that can be connected to **external** and **internal** serial interfaces. ...
www.thewirelessdirectory.com/Bluetooth-Development/ Bluetooth-Development-
Evaluation-Kits.htm - 126k - Cached - Similar pages

Michael Barr's Embedded Systems Glossary
embedded software, **embedded system**, Embedded Systems Conference ... **external**
fragmentation, **external reference**, extrapolation, eXtreme Programming ...
www.netrino.com/Publications/Glossary/ - 117k - Cached - Similar pages

16. Runtime Hosting
The Java VM is an **embedded system** within Virtuoso that allows the calling of **class**
Java ... Java Type/**Class**, Virtuoso **Internal** Type. boolean, smallint ...
docs.openlinksw.com/virtuoso/javaextvm.html - 17k - Cached - Similar pages

Implementing object-oriented designs in ANSI-standard C - 4/13 ...
In true OOP languages, you implicitly use the object **reference** that instance
messages ... They should not manipulate data **external** to the **class** definition. ...
www.edn.com/article/CA46802.html - Similar pages

Swell Software, makers of PEG Portable Embedded GUI
Swell Software, Inc. was founded in 1997 by a group of **embedded-system** software ... The
templates support both **external** and **internal** (CPU embedded) ...
www.swellsoftware.com/PegFAQ.html - 45k - Cached - Similar pages

The MathWorks - Real-Time Workshop Embedded Coder 4.2.1 - Latest ...
The new custom storage classes give **embedded system** designers greater control ... how
internal or **external** storage for floats and doubles is initialized. ...
www.mathworks.com/products/rtwembedded/whatsnew.html - 44k - Jul 5, 2005 -
Cached - Similar pages

MPC566 Product Summary Page
... to enable more efficient use of **internal** or **external** FLASH memory. ... Motor Control
TPU Function Library for **Reference** with Application Notes AN2510 ...
www.freescale.com/webapp/sps/site/prod_ summary.jsp?
code=MPC566&nodeId=0162468rH3bTdG8648 - 157k - Cached - Similar pages

magazine mikroElektronika - European magazine for applied ...
Understanding **Embedded System** Behavior – Power Profiles ... it would be inherently
desirable to pin out the **internal** core buses to **external** pads, ...
www.mikroelektronika.co.yu/ english/magazine/articles/08.htm - 40k -
Cached - Similar pages

[PDF] **Embedded System** Design Course Description
File Format: PDF/Adobe Acrobat
You will use this notebook for **embedded system** notes and designs during the ... addition
of **external** memory for an 8031 which does not have **internal** ROM? ...
ece-www.colorado.edu/~mcclurel/s05hw1.pdf - Similar pages

[PDF] AN 364: Edge Detection **Reference** Design
File Format: PDF/Adobe Acrobat - View as HTML
this application note presents a Prewitt edge detection **reference** design. ... images from
either **internal** or **external** SRAM/SDRAM. The core ...
www.altera.com/literature/an/an364.pdf - Similar pages

Goooooooooogle ▶

Result Page: **1** 2 3 4 5 6 7 8 9 10   **Next**

Google Desktop Search ⊙ · ◉ ⊚ 9:30 AM
Free! Instantly find your email, files, media and web history Download now

reference external internal class "en   Search

Search within results | Language Tools | Search Tips | Dissatisfied? Help us improve

Google Home - Advertising Programs - Business Solutions - About Google